

134177-2

REMARKS

Claims 1-24 are pending in the present Application. Claims 1 and 18 have been amended, leaving Claims 1-24 for consideration upon entry of the present Amendment. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Amendments

Independent claims 1 and 18 have been amended to include the term "wherein the curable composition is free of substituted or unsubstituted bis(4-(meth)acryloylthiophenyl)sulfide." Support for the amendment can be found in the Specification as filed at pages 15-16, paragraph [0042].

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claim 12 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, "[c]laim 12 is indefinite because, although the claim recites a composition having a refractive index, it is known in the art that it is the cured composition that would have the recited refractive index." (Office Action 9/15/05; emphasis in original) The Applicants respectfully disagree.

The refractive index claims is the refractive index of the liquid composition prior to cure. See, for instance, Example 38 at paragraphs [0067] to [0068] of the Specification as filed. Reconsideration and removal of the rejection is respectfully requested.

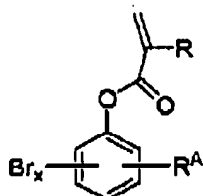
Claim Rejections Under 35 U.S.C. § 102(b)

Claims 18-23 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 5,932,626 to Fong et al. ("Fong"). Applicants respectfully traverse this rejection.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

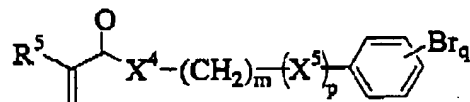
134177-2

Fong is generally directed to optical products containing a layer prepared from a polymerizable composition comprising an alkyl-substituted brominated phenolic ester(meth)acrylate monomer. Particularly, the alkyl-substituted brominated phenolic ester(meth)acrylate monomer satisfies the general structure below:



where R is hydrogen or methyl; R^A is straight or branched alkyl; and x is 1 to 4. (Fong; Col. 5 to Col. 9) Fong further discloses comonomers such as brominated aromatic monomers such as 2-(2,4,6-tribromophenyl)-1-ethanol acrylic ester, tribromo phenyl acrylate, pentabromophenylacrylate, and tetrabromo xylyl diacrylate. (Fong; Col. 10, lines 15-26)

Independent claim 18 of the present application is directed to a curable composition comprising a multifunctional (meth)acrylate, a substituted or unsubstituted aryether (meth)acrylate monomer, a polymerization initiator, and a brominated aromatic (meth)acrylate monomer represented by the formula:



wherein R⁵ is hydrogen or methyl; X⁴ is O or S; X³ is O or S; m is 1, 2, or 3; p is 0 or 1; and q is 4 or 5.

Fong fails to teach the particular limitation of the brominated aromatic (meth)acrylate monomer of claim 18. Fong's alkyl-substituted brominated phenolic ester(meth)acrylate monomers are very different from the brominated aromatic (meth)acrylate monomers of claim 18 as there is no one, two, or three carbon linker between the phenyl group and the (meth)acrylate group. Furthermore, there can optionally be an oxygen or sulfur atom bridging the phenyl group and this carbon linker. Finally, the brominated monomer of the present claim does not contain alkyl substitution on the phenyl ring as is required by Fong's monomers.

134177-2

Turning to the brominated aromatic comonomers of Fong, these too are also substantially different from the brominated aromatic (meth)acrylate monomer of claim 18. Again, none of the comonomers taught by Fong contain the one, two, or three carbon linker between the phenyl group and the (meth)acrylate group. The Fong comonomers are also missing the optional oxygen or sulfur atom bridging the phenyl group and the carbon linker. As Fong fails to teach each and every limitation of independent claim 18, the Applicants respectfully request reconsideration and removal of the rejection to claim 18 and dependent claims 19-23.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-15 and 18-23 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 6,206,550 to Fukushima et al. ("Fukushima"). Applicants respectfully disagree.

Fukushima generally discloses active energy ray-curable compositions comprising,

(A) 20 to 80 parts by weight of a compound represented by the following general

formula I:

$$\text{H}_2\text{C}=\text{C}(\text{R}^1)-\text{C}(=\text{O})-\text{S}-\text{C}_6\text{H}_4(\text{X}_t)-\text{S}-\text{C}_6\text{H}_4(\text{Y}_u)-\text{S}-\text{C}(=\text{O})-\text{C}(\text{R}^1)=\text{CH}_2$$

wherein R¹ represents hydrogen or methyl, X and Y may be the same or different and represent methyl, chlorine, bromine or iodine, and t and u each independently represent an integer of 0-2,

(B) 20 to 80 parts by weight of at least one compound having at least one acryloyl or methacryloyl group in the molecule, or (B-1) 10 to 90 parts by weight of at least one compound having at least two acryloyl or methacryloyl groups in the molecule and (B-2) 1 to 90 parts by weight of at least one monoacrylate or monomethacrylate compound having one acryloyl or methacryloyl group in the molecule, and

(C) 0.01 to 5 parts by weight of an active energy ray-sensitive radical polymerization initiator with respect to 100 parts by weight of the total of components (A) and (B) or components (A), (B-1) and (B-2),

as well as a lens sheet comprising a lens section formed on at least one side of a transparent substrate using the composition useful as a backlight.

(Fukushima; Abstract)

134177-2

Fukushima requires the presence of a compound according to formula I, a general structure representing substituted or unsubstituted bis(4-(meth)acryloylthiophenyl)sulfides. This particular compound is required to be present in the Fukushima composition to "improve[] the refractive index without lowering the transmittance of the cured active energy ray-curable composition of the invention." (Fukushima; Col. 3, ll. 1-4)

As amended, independent claims 1 and 18 require the curable composition be free of substituted or unsubstituted bis(4-(meth)acryloylthiophenyl)sulfide.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art, or that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Fukushima fails to render obvious amended claims 1 and 18 as Fukushima fails to teach or suggest each and every limitation in the claims. Particularly, claims 1 and 18 require the curable composition to be free of substituted or unsubstituted bis(4-(meth)acryloylthiophenyl)sulfide. Fukushima, on the other hand, requires the presence of a substituted or unsubstituted bis(4-(meth)acryloylthiophenyl)sulfide as illustrated by component A and the general formula I.

Furthermore, a skilled artisan would not find motivation within Fukushima to prepare active energy ray-curable compositions free of component A, a compound of formula I. Fukushima describes the difficulty of preparing prism sheets having both high refractive indices and good light transmittance. Fukushima describes specific active energy ray-curable compositions that provide cured products with high refractive indexes without lower light transmittance, to provide a high brightness-enhancing effect. (Fukushima; Col. 2, ll. 1-10) These specific compositions all contain a compound according to formula I. Indeed, the entire Fukushima reference is directed to active energy ray-curable compositions containing a

134177-2

compound of formula I, which are substituted or unsubstituted bis(4-(meth)acryloylthiophenyl)sulfides. As Fukushima teaches the benefits of having a compound of formula I present in active energy ray-curable compositions used to prepared prism sheets, there is no motivation to modify Fukushima's compositions to result in compositions free of such a compound. Accordingly, independent claims 1 and 18 as amended above have not been rendered obvious by Fukushima. The Applicants respectfully request reconsideration and removal of the rejections over claims 1 and 18 and their dependent claims 2-15 and 19-23.

Double Patenting Rejections

Claims 1-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,833,391 to Chisholm et al. ("Chisholm '391"). Chisholm '391 is a patent commonly owned with the present application. Applicants, therefore, respectfully submit herewith a terminal disclaimer to overcome the double patenting rejection over the Chisholm '391 claims. Accordingly, the Applicants respectfully request reconsideration and removal of the rejections over claims 1-24.

Claims 1-24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 8-18 of copending U.S. Application Serial No. 10/897,364 to Chisholm et al., Publication No. 2005/0049376 ("Chisholm '364"). Applicants thank the Examiner for pointing out the alleged, potential obviousness-type double patenting issues between the claims of the present application and those of Chisholm '364. However, as there are no allowed claims in the Chisholm '364 application at this time, the Applicants respectfully request withdrawal of the provisional rejection.

134177-2

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-3621.

Respectfully submitted,

CANTOR COLBURN LLP

By 

Roberta L. Pelletier

Registration No. 46,372

Date: November 14, 2005
CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002
Telephone (860) 286-2929
Facsimile (860) 286-0115
Customer No.: 23413